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THE LYGAEIDAE OF THE GALÁPAGOS ISLANDS  
(Hemiptera:Heteroptera)

By

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With the publication of this paper, reports on the Heteroptera of the Galápagos International Scientific Project are nearly complete. Published papers cover the Anthocoridae (Herring, 1966), the Tingidae (Drake and Froeschner, 1967), the Saldidae and Veliidae (Polhemus, 1968a, b), the Cydnidae (Froeschner, 1968), the Nabidae (Kerzhner, 1968), the Miridae (Carvalho and Gagné, 1968), and the emesine Reduviidae (Villiers, 1970). The families Pentatomidae, Coreidae, Rhopalidae, Stenocephalidae, Berytidae, Pyrrhocoridae, Reduviidae, Gerriidae, and Corixidae also are found in the Galápagos Islands, and members of the expedition collected all but Pyrrhocoridae and Stenocephalidae. Hopefully, the many new island records in these families will be summarized in another contribution. The collections of only the Rhopalidae may still prove to contain new species.

Before the expedition, Dr. Usinger and I had hopes of greatly increasing the number of Lygaeidae recorded from the islands, especially in the subfamily Orsillinae, a group well known for its ability to colonize islands. Only four species of Lygaeidae, including two orsillines, had previously been recorded from the Galápagos (Linsley and Usinger, 1966). Herein I am able to report only nine species of lygaeids—five are orsillines—of which two, including one of the orsillines, are possibly introduced by man. While more lygaeids may be found in the archipelago, I seriously doubt that the known endemic fauna of the group will double again. Because the lygaeid fauna of Hawaii contains forty percent of the world orsillines, the sparse fauna of the Galápagos deserves some explanation.

MacArthur and Wilson (1967) discuss the factors that determine the introduction and extinction rates of island faunas as they develop the concept of an island colonization rate. Further, they postulate that each island or archipelago has a fairly fixed capacity for numbers of species. Among islands populated from American sources, the Galápagos have a far better chance of receiving introductions than do most other islands of the eastern Pacific, primarily because they form an archipelago. The Hawaiian Islands, a larger archipelago, would have received fewer introductions because of its great isolation.

Some examples will illustrate the point. The smallest orsilline faunas are those of Guadelupe Island, 180 miles off Baja California, and San Felix, 550 miles west of Chile, each having a single undescribed endemic species (belonging to *Ortholomus* and *Nysius*, respectively). The Juan Fernandez Islands, two islands about 450 miles off the coast of Chile, have two endemic orsillines, *Nysius baecstroemi* and *Robinsonocoris tingitoides*, the latter an endemic genus. The Galápagos Islands have five species, resulting from four introductions, including the endemic genus *Darwinysius* with two species. The Hawaiian fauna by contrast is rich. Of the 92 species of Orsillinae, the tribe Metrargini [probably of American origin (Ashlock, 1967)] contains 58 species (in six endemic genera) resulting from but two introductions. The remaining Hawaiian species (in *Nysius* and the endemic *Nesomartis*, a probable derivative of *Nysius*) are of unknown origin. Clearly, the Galápagos have a much higher introduction rate than Hawaii, but the larger, more hospitable Hawaiian Islands have a lower extinction rate than the dryer and smaller Galápagos.

Thus, possible ecological situations on the Galápagos are nearly saturated by naturally introduced orsillines. Hawaii's isolation has allowed few introductions, but its low extinction rate, combined with the large number of ecological situations, permitted explosive radiation.

Linsley and Usinger (1966) acknowledge those that made the G.I.S.P. expedition possible. I must add my own thanks to the late R. L. Usinger, who made my participation possible. Much of the work on this paper was done at the B. P. Bishop Museum, Honolulu, with financial help from two NSF grants (GB-3105 and GB-5860). Types of new species are deposited in the California Academy of Sciences, San Francisco, and specimens upon which the study was based will be found in that institution and in the Bishop Museum; the U. S. National Museum; the California Insect Survey, Berkeley; and the collections of J. A. Slater, G. G. E. Scudder, M. H. Sweet, and myself. All measurements are in millimeters, and the year of collection is 1964 unless otherwise noted.

#### KEY TO GALÁPAGOS GENERA OF LYGAEIDAE

1. Suture between abdominal segments IV and V (second visible suture) curving anteriorly, not reaching lateral margin of abdomen ..... Rhyparochrominae: Myodochini ..... 2
- Suture between segments IV and V not curving anteriorly, clearly reaching lateral margin of abdomen ..... 3



2. Head constricted behind eye; eye removed from base of head by a distance greater than length of an eye ..... *Heraeus*  
 Head not constricted behind eye; eye removed from base of head by a distance less than length of an eye ..... *Pachybrachius*
3. Scutellum bifid apically; clavus basally opaque, apically hyaline ..... Cyminae:  
 Ninini ..... *Cymoninus*  
 Scutellum not bifid apically; clavus not divided into distinct opaque and hyaline areas .....  
 Orsillinae ..... 4
4. Costal margin of corium straight, exposing connexivum of abdomen laterally .....  
 Orsillini ..... *Ortholomus*  
 Costal margin of corium straight at most for a distance less than length of scutellum, then arcuately curved to apex; connexivum of abdomen completely covered ..... 5
5. Buccula not punctate; lateral margin of abdomen and corium without cross-striated stridulitra ..... Nysiini ..... *Nysius*  
 Either buccula punctate or lateral margin of abdomen and corium with cross-striated stridulitra ..... Metrargini ..... 6
6. Buccula punctate, not tapering, ending abruptly at base of head; antenniferous tubercle acutely produced; abdomen and corium without stridulatory structures .....  
 ..... *Darwinysius*  
 Buccula impunctate, tapering to a low carina well before base of head; antenniferous tubercle not acutely produced; abdomen and corium laterally with cross-striated stridulatory structure ..... *Xyonysius*

### Genus *Nysius* Dallas

*Nysius* DALLAS, 1852, p. 551.

Although two species from the Galápagos were originally described in the cosmopolitan genus *Nysius*, both have since been placed in other orsilline genera in the tribe Metrargini. *Nysius* (*Ortholomus*) *naso* Van Duzee is placed in *Xyonysius* (Ashlock and Lattin, 1963) and *Nysius* (?) *marginalis* Dallas is placed in *Darwinysius* (Ashlock, 1967). The following is the first true *Nysius* to be reported from the Islands.

#### *Nysius usitatus* Ashlock, new species.

(Figures 1, 3.)

Head nearly flat between eyes, densely punctate, sparsely clothed with appressed pale hairs, length 0.66, width 0.88, antecular length 0.27, eye length 0.29, eye width 0.19, interocular space 0.48; buccula widest anteriorly, tapering posteriorly, and ending abruptly just before base of head; labium extending to between hind coxae, first segment not reaching base of head but just exceeding buccula, segment lengths from base 0.39, 0.39, 0.37, 0.29; antenna with first segment exceeding clypeus by nearly half its length, segment lengths from base 0.26, 0.60, 0.49, 0.49.

Pronotum moderately clothed with fine curved subappressed hairs, disk densely punctate, distance between punctures from one-half to one diameter of a puncture, sides nearly straight; length 0.59, width 1.02. Scutellum

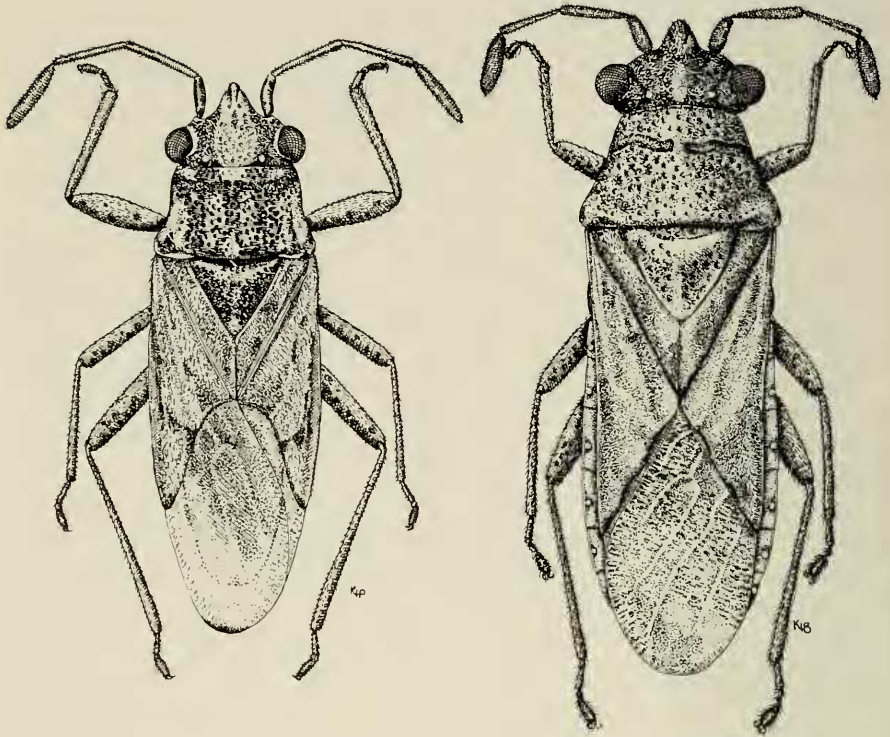


FIGURE 1. Dorsal views of (left) *Nysius usitatus* and (right) *Ortholomus usingeri*.

with vestiture and punctation similar to those of pronotum; Y-shaped carina appearing as a tumid pyramid; length 0.48, width 0.58.

Hemelytron exceeding abdomen, clavus and corium with surface almost dull, moderately clothed with subappressed curved hairs, with additional hairs projecting laterally along base of costal margin, clavus obscurely punctate only at base of claval suture, costal margins subparallel and paralleling vein R+M to level of apical two-thirds of scutellum, then gently becoming divergent and arcuate to apex of corium, veins evident but not prominent; length of claval commissure 0.34; length of corium 1.50; membrane normal with veins evident but not distinct, basal length to level of corial apex 0.65, apical length from corial apex 0.77.

*Color.* Light reddish brown, with broad stripe passing through each ocellus, margins of clypeus, three spots at base of clypeus, ventor except buccula, and spot below eye black. Buccula, labium, and antenna yellowish brown, first segment of antenna a little darker. Pronotum light yellowish brown,



with partial indistinct median stripe, broad complete stripe behind each ocellus, and narrow lateral stripe dark brown, callosities black. Scutellum black or nearly so, apex white. Hemelytra light yellowish brown with indistinct brown spots on veins and apical margin. Membrane hyaline, embrowned medially except veins obscurely opaque white, ventor black except anterior and posterior margins of propleura, acetabula, scent gland area, metapleural plate, and spots laterally and apically on abdomen pale. Legs pale yellowish brown, with usual brown spots on femur, tibia with a brown knee band.

**HOLOTYPE.** ♂, Santa Cruz Island, 1.5 mi. north of Academy Bay, 13 February, under *Portulaca* (P. D. Ashlock).

**PARATYPES.** Santa Cruz Island, 9 ♂, 10 ♀, same data as holotype; 1 ♀, same data but 11 February; 32 ♂, 17 ♀, same data but 15 February; 3 ♂, 5 ♀, same data but 25 February; 3 ♀, Horneman Farm, 220 m., 2 April (D. Q. Cavagnaro).

Most specimens of this species were collected at the foot of the barranca (cliff) on the new trail from Academy Bay, Santa Cruz Island, under *Portulaca* and in company with *Darwinysius marginalis*. Since *Nysius usitatus* was collected only near Academy Bay on Santa Cruz and not at all from the *Portulaca* habitat on all other islands visited, it may be a recent introduction to the Galápagos. Specimens fit Dallas' (1852, p. 553) description of *N. nubilis* from Colombia fairly well, but the *N. nubilis* type is not extant. Dr. Usinger searched in vain for it at the British Museum in 1964, and found (correspondence) that the British Museum copy of the Dallas description has a note: "type missing." I have a short series of *Nysius* from Guayaquil, Ecuador, and another from Palmira, Colombia, that also fit Dallas' description, but the spermathecae differ substantially from that of *N. usitatus* (fig. 3). Since there is only slight evidence that *N. usitatus* is introduced, and its identity with *N. nubilis* is open to question, I have described the Galápagos form as new. The problem of the identity of *N. nubilis* can best be solved by the judicious choice of a neotype when adequate series of *Nysius* are available from northwestern South America.

### Genus *Ortholomus* Stål

*Nysius* (*Ortholomus*) STÅL, 1872, p. 43.

*Ortholomus* Stål, BAKER, 1906, p. 134.

### *Ortholomus usingeri* Ashlock, new species.

(Figures 1, 3.)

Head flattened between eyes, obscurely punctate, densely covered with flattened appressed hairs, vertex carina straight, eye prominent, slightly raised above vertex; length 0.85, width 1.11, anteocular length 0.44, eye length 0.22, eye width 0.29, interocular space 0.61; buccula widest anteriorly,

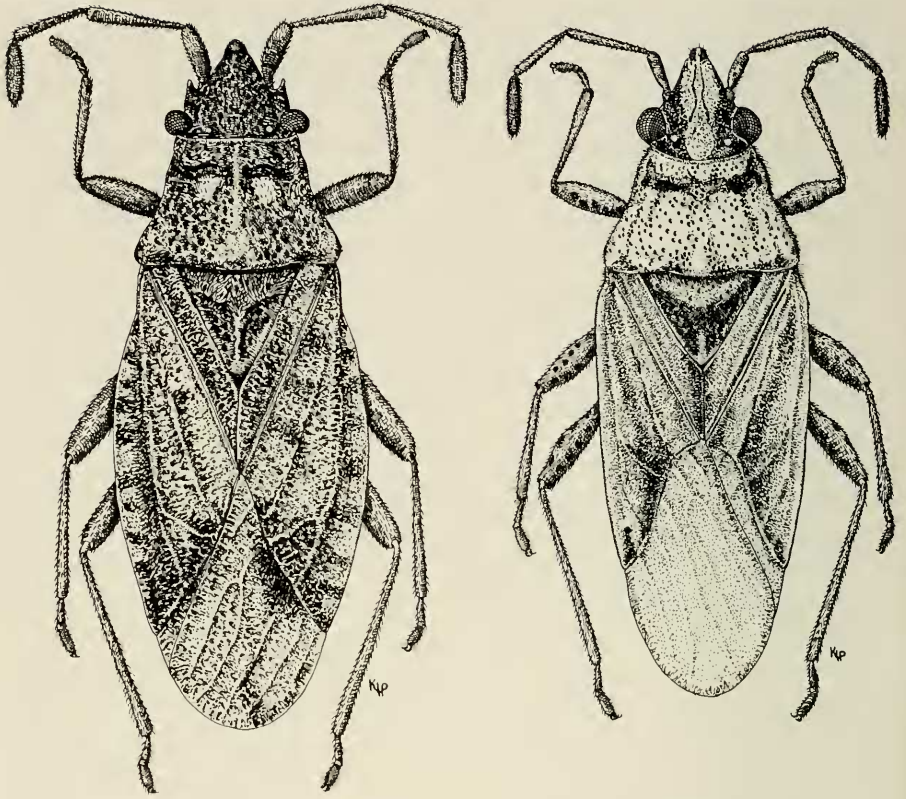


FIGURE 2. Dorsal views of (left) *Darwinysius wenmanensis* and (right) *Xyonysius naso*.

gradually narrowing posteriorly to mid eye level without abrupt change in width; labium reaching between posterior coxae, first segment exceeding buccula, not reaching base of head, segment lengths from base 0.46, 0.43, 0.46, 0.39; antenna with fine erect pubescence, first segment slightly exceeding clypeus, segment lengths from base 0.29, 0.46, 0.44, 0.49.

Pronotum clothed with appressed flattened somewhat silky hairs, with occasional short erect hairs, moderately punctate, distance between punctures from one-half to one diameter of a puncture, sides straight, slightly swollen, length 0.78, width 1.28. Scutellum with vestiture and punctation like those of pronotum, Y-shaped carina swollen on upper arms, stem not prominent, length 0.54, width 0.75.

Hemelytron slightly exceeding abdomen, clavus and corium moderately clothed with short silky appressed hairs, with a few short erect hairs projecting

laterally along base of costal margin; veins evident but not prominent; length of claval commissure 0.49; length of corium 1.80; membrane irregularly wrinkled transversely; veins distinct, basal length to level of corial apex 0.77, apical length from corial apex 0.78.

Abdomen with connexival spiracles raised, very prominent.

*Color.* Head very dark brown, clypeus, median stripe on posterior half of vertex, buccula, labium, and antenna paler except antennal segment IV very dark brown. Pronotum and scutellum reddish brown, callosities and punctures a little darker. Hemelytron pale yellowish brown, darkened apically on clavus and corium and on obscure spots on veins; vestiture nearly white, silky. Connexival segments pale, darker around pale spiracles. Legs yellowish brown, femur with obscure, slightly darker spots. Venter reddish brown, acetabula and scent gland paler.

*HOLOTYPE.* ♂, Santa Cruz Island, grassland, 1,800 ft., north of Academy Bay, 20 February, on *Hypericum pratense* (P. D. Ashlock).

*PARATYPES.* Santa Cruz Island, 6 ♂, 12 ♀, 4 nymphs, same data as holotype; 4 ♂, 1 ♀, same data but 2,100 ft.; 1 ♂, 1 ♀. Bella Vista, 26 February (R. L. Usinger); 15 ♂, 15 ♀, Table Mountain, 440 m., 16 April (D. Q. Cavagnero). Floriania Island, 1 ♂, 1 ♀, 15 February, *Verbena* (R. L. Usinger); 57 ♂, 48 ♀, Whitmer's Farm, 15 February, *Verbena* (R. L. Usinger); 1 ♂, 2 ♀, same data but *Cordia* species; 1 ♂, 1 ♀, moist forest 200 m. above Black Beach, 15 February, *Cordia* tree with yellow flowers (R. L. Usinger); 7 ♂, 10 ♀, 18 February (R. L. Usinger). San Cristobal Island, 3 ♂, 4 ♀, Progreso, 23 February, *Verbena* (R. L. Usinger).

*Ortholomus usingeri* is less elongate than most of the described species in the genus, and the connexivum is more broadly exposed, being approached only by *O. gibbus* (Berg) in this respect. The spiracles are more prominent and enlarged than in any other species. All series of the species are variable in color, ranging from the pale form illustrated (fig. 1), to specimens that are highly maculated on the corium, clavus, and membrane. Some specimens have a very dark, contrasting claval apex. None of these variations are correlated with island of origin or with host plant. The new species of *Ortholomus* from Guadelupe Island (see Introduction) may be very closely related to *O. usingeri*.

It is with devoted appreciation that I dedicate this Galápagos orsilline to R. L. Usinger, who was the leading authority in the Orsillinae, and whose leadership of the G. I. S. P. expedition he considered the high point of his life.

### Genus *Darwinysius* Ashlock

*Darwinysius* ASHLOCK, 1967, p. 42.

*Darwinysius* is the only endemic genus of Lygaeidae—and one of the very few in the Heteroptera—found in the Galápagos. It is closely related to

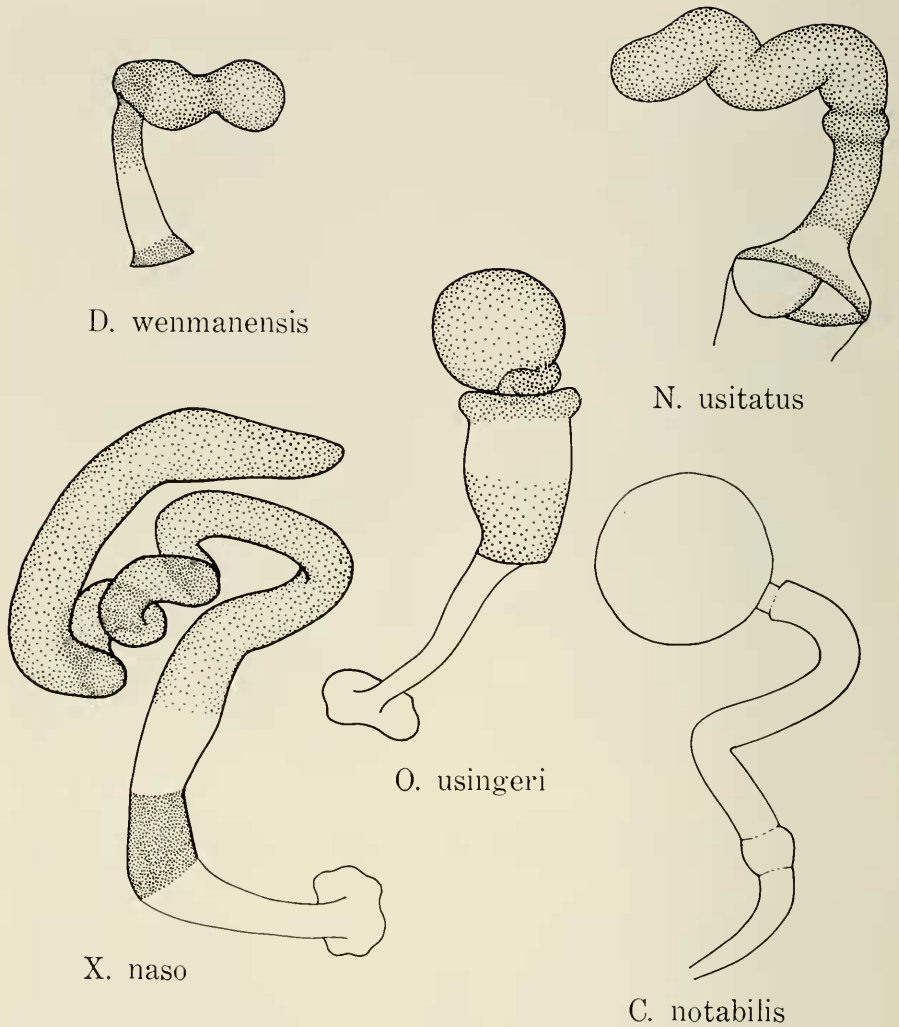


FIGURE 3. Spermathecae of the named species.

*Robinsonocoris* in the Juan Fernandez Islands, differing principally in features correlated with the flightlessness of *Robinsonocoris*. At the time of the original description of *Darwinysius* for *Nysius* (?) *marginalis* Dallas, it was mentioned that a second species had been found on the Galápagos.

KEY TO GALÁPAGOS SPECIES OF DARWINYSIUS

Larger species, male more than 3.2 long, female more than 3.8 long; clothed above with short, appressed hairs; vertex of head raised above level of top of eye; Wolf Island .....  
 ..... *D. wenmanensis* Ashlock, new species



Smaller species, male less than 3.1 long, female less than 3.5 long; clothed above with mixed erect and appressed hairs; vertex of head not raised above level of top of eye; main islands ....  
----- *D. marginalis* (Dallas)

### ***Darwinysius marginalis* (Dallas).**

*Nysius* (?) *marginalis* DALLAS, 1852, p. 556.

*Cymus galapagensis* STÅL, 1959, p. 252 (synonymy by Butler, 1877).

*Darwinysius marginalis* (Dallas), ASHLOCK, 1967, p. 42.

In the summer of 1964, Dr. R. L. Usinger checked the types of *Cymus galapagensis* Stål and *Nysius* (?) *marginalis* Dallas at my request. In Stockholm he confirmed Butler's (1877) synonymy of Stål's species with that of Dallas, but in London, he found Dallas' series of eight specimens to contain two species: four of the eight belonged to *Xyonysius naso* (Van Duzee). Since Dallas did not select a holotype, and no lectotype had since been chosen, Usinger selected the best specimen of the remaining four as a lectotype. He wrote that the lectotype "is rather broad and well marked and has no antennae." The specimen is numbered 77-2 (as were the *X. naso*) and is from Charles Island (Floreana). The remaining specimens were from James Island (Santiago) and "were very poor and not suitable to be made a lectotype." The Charles Island specimen (no. 77-2) is here formally selected as the lectotype of *Nysius* (?) *marginalis* Dallas.

Published records of *Darwinysius marginalis* are from three islands: Floreana, Santiago, and Daphne Major. Members of the G. I. S. P. expedition collected well over 300 specimens and can add five islands to the list: Isabella, Fernandina, Rabida, Pinzon, and Santa Cruz. Almost all of my specimens were collected under *Portulaca*, where they were feeding on fallen seeds of the plant. Dr. Usinger collected 55 specimens on *Euphorbia viminea* at Black Beach, Floreana.

*Darwinysius marginalis* is generally similar to *D. wenmanensis*; differentiating characters can be found in the key to species. A dorsal view of *D. marginalis*, a side view of the head, and drawings of the aedeagus and spermatheca are given in Ashlock (1967).

### ***Darwinysius wenmanensis* Ashlock, new species.**

(Figures 2, 3.)

Head elevated above eye about one-third height of eye, sparsely clothed with flattened appressed hairs, length 0.71, width 0.80, antecular length 0.46, eye length 0.20, eye width 0.15, interocular space 0.48, buccula widest anteriorly, narrow, but not tapering to base of head, slightly projecting past posterior point of attachment, not reaching base of head, densely punctate; labium just reaching posterior coxae, first segment not reaching posterior end of buccula, segment lengths from base 0.46, 0.43, 0.44, 0.32; antenna with flattened sub-appressed hairs on first segment, semierect fine hairs on fourth segment, second

and third segments intermediate, first segment exceeding clypeus by nearly half its length; segment lengths from base 0.39, 0.56, 0.48, 0.41.

Pronotum with flattened appressed hairs, deeply and densely punctate, cicatrices depressed, area anterior to cicatrices somewhat inflated; length 0.78, width 1.19. Scutellum with vestiture and punctation similar to those of pronotum, with a strongly elevated Y-shaped carina, length 0.51, width 0.68.

Hemelytron exceeding abdomen, clavus and corium moderately dotted with appressed hairs, without erect hairs at base of lateral margin, surface overall ridged, punctate on both sides of claval suture and outer edge of vein R+M for entire length, all veins prominent and elevated, length of claval commissure 0.54, length of corium 2.04, apex attaining abdominal segment VII; membrane with surface irregularly ridged transversely, veins prominent, basal length to level of corial apex 0.90, apical length from corial apex 0.54.

*Color.* Head, labium, antenna very dark brown, apices of first to third antennal segments and lower edge of buccula pale. Pronotum, scutellum, and hemelytron mottled dark and yellowish brown; pronotum with a patch of white flattened hairs behind cicatrix, corium with lateral margin alternately light and dark, apical margin beyond intersection of vein Cu very dark brown, membrane including veins mottled brown and transparent. Venter dark brown except acetabula, posterior lobe of propleura, mesothoracic scent gland, and lateral posterior angle of metapleuron pale, legs with femur very dark brown, apex pale, tibia and tarsi pale with dark band dorsally and subapically on tibia.

*HOLOTYPE.* ♂, Wolf Island (Wenman). 31 January, under *Portulaca* (P. D. Ashlock).

*PARATYPES.* Wolf Island, 15 ♂, 15 ♀, same data as holotype; 1 ♂, 24 September 1906 (F. X. Williams).

*Darwinysius wenmanensis* is abundantly distinct from the type species of the genus as indicated by characters in the key. Both species are variable in color pattern, ranging from nearly immaculate on the clavus and corium to quite dark with few pale maculations, but in general *D. wenmanensis* tends to be darker. Such features of both species as the spotted costal margin, the acute antenniferous tubercles, the general body shape, and, in *D. wenmanensis*, the raised vertex of the head, make both look very much like miniature *Nesoclimacias* (Hawaiian Islands). This similarity was noted earlier (Ashlock, 1967, p. 35); however, I now think these similarities—of *Robinsonocoris* and *Darwinysius* with the Hawaiian *Metrarga*, *Nesoclimacias*, and *Nesocryptias*—represent parallelisms rather than a monophyletic origin.

Specimens of *D. wenmanensis* from Wenman Island were the first members of the genus I collected, and it was on Wenman that the “under *Portulaca*” habitat of *Darwinysius* was discovered. Unfortunately, it was then too late to

search the *Portulaca* on Darwin Island (Culpepper), the most remote of the archipelago.

### Genus *Xyonysius* Ashlock and Lattin

*Xyonysius* ASHLOCK and LATTIN, 1963, p. 702.

#### *Xyonysius naso* (Van Duzee).

(Figures 2, 3.)

*Nysius* (*Ortholomus*) *naso* VAN DUZEE, 1933, p. 27.

*Ortholomus naso* (Van Duzee), BARBER, 1934, p. 285.

*Nysius naso* Van Duzee, USINGER, 1941, p. 131.

*Xyonysius naso* (Van Duzee), ASHLOCK and LATTIN, 1963, p. 702.

*Xyonysius* is a New World genus of metragine Orsillinae whose species are found from Canada to Argentina and Chile. The endemic Galápagos species *X. naso* is one of the more variable ones, ranging from forms with immaculate hemelytra to forms with three irregular dark brown longitudinal stripes on the corium, the middle one continuing onto the membrane, and dark brown claval apices. Figure 1 shows a specimen with intermediate coloration. This variation was found in all series of the species collected, and does not appear to be correlated with island or host plant. Unlike *X. californicus* (Stål), a wide-spread North American species found on many composites, *X. naso* seems to be confined to species of the endemic composite genus *Scalesia*. The species was described from a single specimen taken on Floreana (Charles Island). Dr. Usinger and I collected 59 specimens on the following islands and host plants: Santa Cruz (*S. affinis*, *S. helleri*), Fernandina (*Scalesia* species), Barrington (*S. helleri*), Isabella (*S. affinis*, *S. gummifera*), and Floreana (*S. affinis*). Nowhere was the species abundant.

### Genus *Cymoninus* Breddin

*Cymoninus* BREDDIN, 1907, p. 38.

#### *Cymoninus notabilis* (Distant).

(Figures 3, 4.)

*Ninus notabilis* DISTANT, 1882, p. 191.

*Cymoninus notabilis* (Distant), VAN DUZEE, 1917, p. 163.

This species is here reported from the Galápagos for the first time. Wide-spread, it ranges from the southern United States through Central America and the Antilles south to Argentina and Brazil. I collected 55 specimens on Santa Cruz Island on the trail north of Academy Bay and Bella Vista at about 1,300 feet on a sedge identified by Ira Wiggins as *Cyperus confertus* Swartz. D. Q. Cavagnaro also collected a few specimens on Santa Cruz at the Horneman Ranch, just north of Bella Vista. This species may be a recent introduction to the Galápagos. I collected two specimens in the harbor at Guayaquil, Ecuador, at light, on board ship.

Genus *Pachybrachius* Hahn*Pachybrachius* HAHN, 1826, p. 18.*Orthaca* DALLAS, 1852, p. 580.KEY TO GALÁPAGOS SPECIES OF *PACHYBRACHIUS*

Smaller species, less than 4 long; usually brachypterous; corium with long erect hairs and an oval white spot near inner angle ..... *P. nesovinctus* Ashlock, new species

Larger species, more than 4 long; never brachypterous, fully winged; corium with short appressed hairs and without an oval white spot near inner angle .....  
..... *P. insularis* Barber

***Pachybrachius insularis* (Barber).**

(Figure 5.)

*Orthaca insularis* BARBER, 1925, p. 246.*Pachybrachius insularis* (Barber), SLATER, 1964, p. 1127.

Barber's Galápagos *Pachybrachius* has been recorded from Isabella, Santiago, Baltra, and Santa Cruz Islands. Members of the expedition collected the species from all of these but Isabella and Baltra, but also collected it on Fernandina and Floreana. Most of the material was collected from lights, though occasional specimens were collected from the forest floor. The two specimens from Floreana, both females (Kuschel and Usinger, collectors) were unusual, since both had the labium extending onto the abdomen. Barber (1925) described the labium as "reaching just past intermediate coxae." However, labial length in a 36-specimen sample varied as follows: past front but not to mid coxae, 5 ♂, 0 ♀; between mid coxae, 14 ♂, 7 ♀; past mid but not to hind coxae, 3 ♂, 4 ♀; between hind coxae, 0 ♂, 1 ♀; behind hind coxae onto abdomen, 0 ♂, 2 ♀. This character is clearly variable, and females tend to have the longer labia. Although the two females with the longest labia came from the same island, there was no other correlation of labial length with island of origin.

***Pachybrachius nesovinctus* Ashlock, new species.**

(Figures 4, 5.)

Head slightly elevated between eyes, densely but shallowly punctate, sparsely dotted with inconspicuous subappressed and long erect hairs, length 0.71, width 0.75, antecular length 0.37, eye length 0.17, interocular space 0.44; buccula high, short, bucculae joined as a single low carina at level of antenniferous tubercle; labium not quite reaching mid coxae, first segment not reaching base of head, segment lengths from base 0.44, 0.44, 0.27, 0.29; antenna with first segment exceeding clypeus by nearly half its length, segment lengths from base 0.34, 0.63, 0.49, 0.94 (fourth segment drawn too thick in figure 3).

Pronotum with sparse short subappressed hairs and long erect fine hairs, with a single transverse row of widely spaced shallow small punctures on collar,



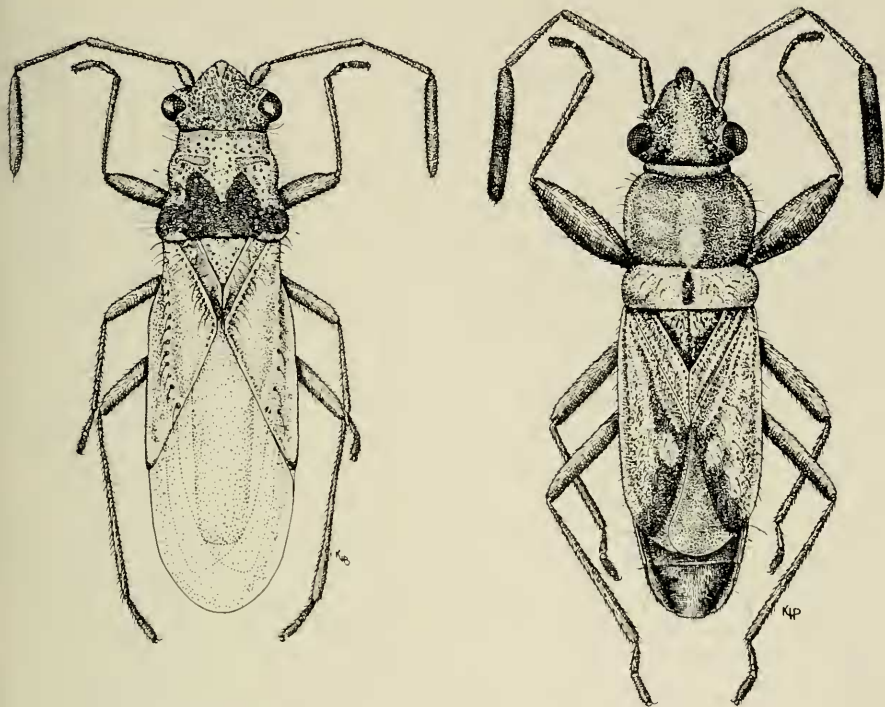
*Cymoninus notabilis**Pachybrachius nesovinctus*

FIGURE 4. Dorsal views of the named species, and anterior view of fore femur of the holotype of *P. nesovinctus*.

and similar punctures scattered over posterior lobe, length 0.83, collar length 0.09, width 0.56, anterior lobe length 0.29, width 0.88; divisions between collar and two lobes very distinct, anterior lobe globular. Scutellum with vestiture and punctation like those of hind lobe of pronotum; length 0.46, width 0.46.

Brachypterous, hemelytron reaching midway onto abdominal segment VI, clavus and corium with surface subshining, vestiture as in pronotum and scutellum, clavus with three linear rows of punctures and a confused fourth row between medial and scutellar rows, corium with two linear rows of punctures

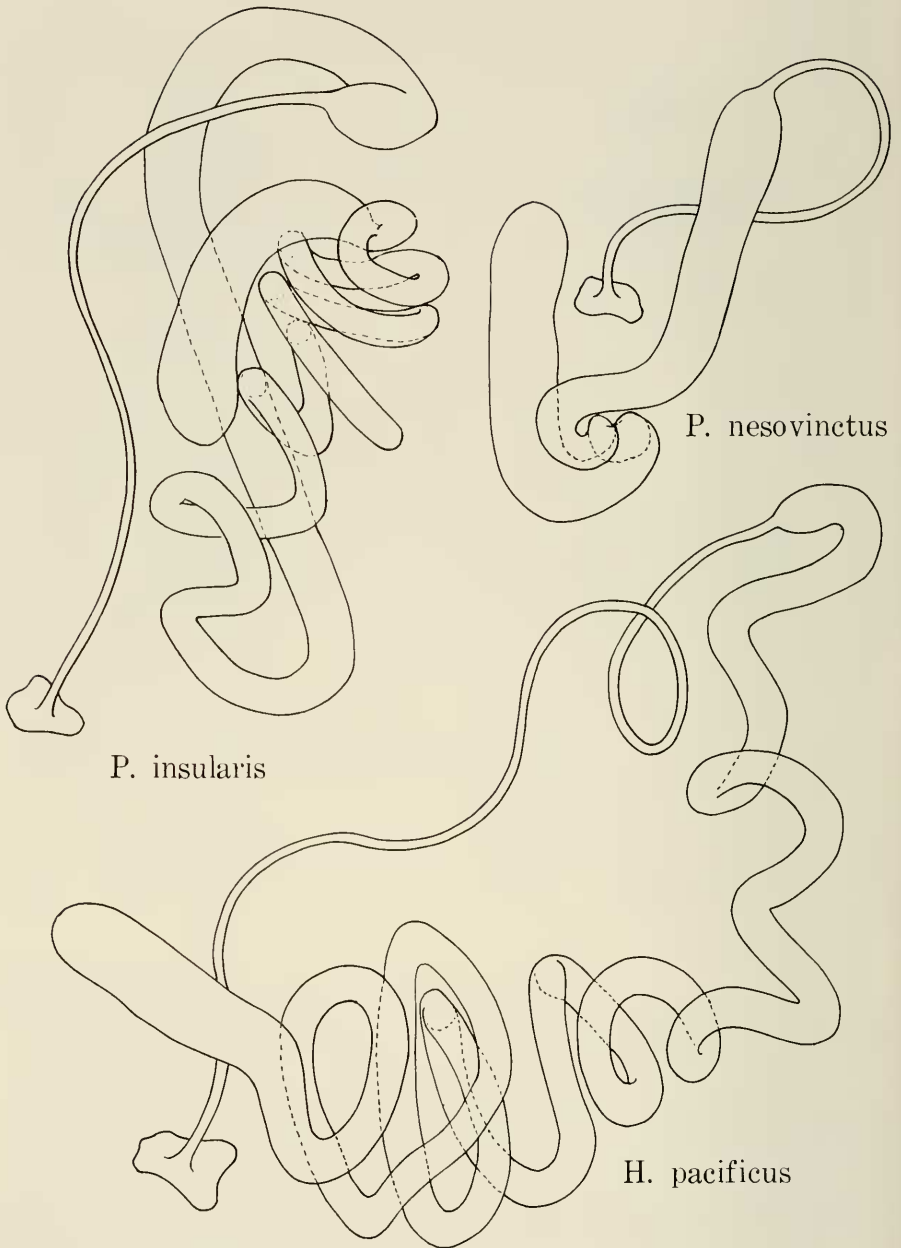


FIGURE 5. Spermathecae of the named species.

paralleling claval suture, randomly punctate laterally, with a few punctures posterior to level of apex of clavus; length of claval commissure 0.31, length of corium 1.36; membrane dull, veins not visible, basal length to level of corial apex 0.63, apical length from corial apex 0.07.

Fore femur armed beneath with spines in two ranks as figured (fig. 4); fore tibia unarmed, slightly curved.

*Color.* Head black, clypeus and juga dark reddish brown, antenna, buccula, and labium light yellowish brown. Pronotum black, collar anteriorly pale, posterior lobe reddish brown with dark median line. Hemelytron with clavus and corium light yellowish brown, punctures reddish brown, corium with white spot in inner angle and the black apical margin of *P. vinctus* group. Venter dark with anterior and posterior margins of propleuron, acetabula, scent gland auricle, and metapleural plate pale. Abdomen ventrally and dorsally dark reddish brown. Legs light yellowish brown, fore femur dark brown except apically.

*HOLOTYPE.* ♂, Santa Cruz Island, grassland, 2,100 ft., north of Academy Bay, 20 February (P. D. Ashlock).

*PARATYPES.* Santa Cruz Island, 10 ♂, 12 ♀, same data as holotype; 1 ♀ (macropterous), Table Mountain, 440 m., 16 April (D. Q. Cavagnaro). Fernandina Island, 1 ♀, southwest side, 1,000 ft., 4 February (P. D. Ashlock).

This description adds another species to the confusing *Pachybrachius vinctus* complex, which badly needs revision. The new species is distinct in having long erect hairs on the dorsum. The New World *P. vinctus* (Say) and the closely related Pacific *P. pacificus* (Stål) both have small, inconspicuous appressed hairs on the dorsum. *Pachybrachius nesovinctus* is usually found in the brachypterous state (only one macropterous specimen has been collected), as are many populations of *P. pacificus* from the western and central Pacific. Brachypterous forms are less common in the Western Hemisphere species *P. vinctus*. The Galápagos species show more brown on the hemelytron than do specimens of *P. vinctus* from the North and South American mainlands.

### Genus *Heraeus* Stål

*Heraeus* STÅL, 1862, p. 315.

#### ***Heraeus pacificus* Barber.**

(Figure 5.)

*Heraeus pacificus* BARBER, 1925, p. 21.

Barber described this species from Santiago, and it has previously been recorded only from this island. Members of the expedition collected it in large numbers from Santa Cruz, and a single specimen was collected from Floreana. Many of the specimens were collected at light between Academy Bay and the Horneman Ranch on Santa Cruz, and I collected a large series in the so-called grassland area of the island at 1,800 feet under *Jaegeria hirta*.

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